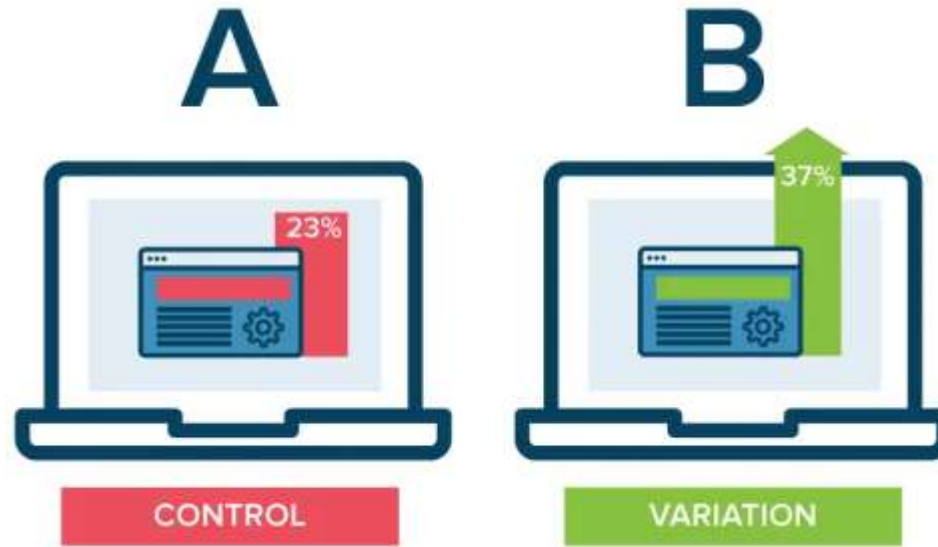# A/B TEST ON THE HOTEL BOOKING WEBPAGE

Peisu Wang

# Introduction – What is the A/B test?

A/B testing is a methodology for comparing two versions of a webpage against each other to determine which one performs better based on the metrics we choose.

In an A/B test, we take a webpage and modify it to create a second version of the same page and run the statistical analysis to determine which variance has a better performance.

Introduction – Background

We are comparing the 'Price Panel' of a hotel's booking form where we show key information on the stay with displaying star ratings (control) against customer ratings (variant).

CONTROL

VARIANT
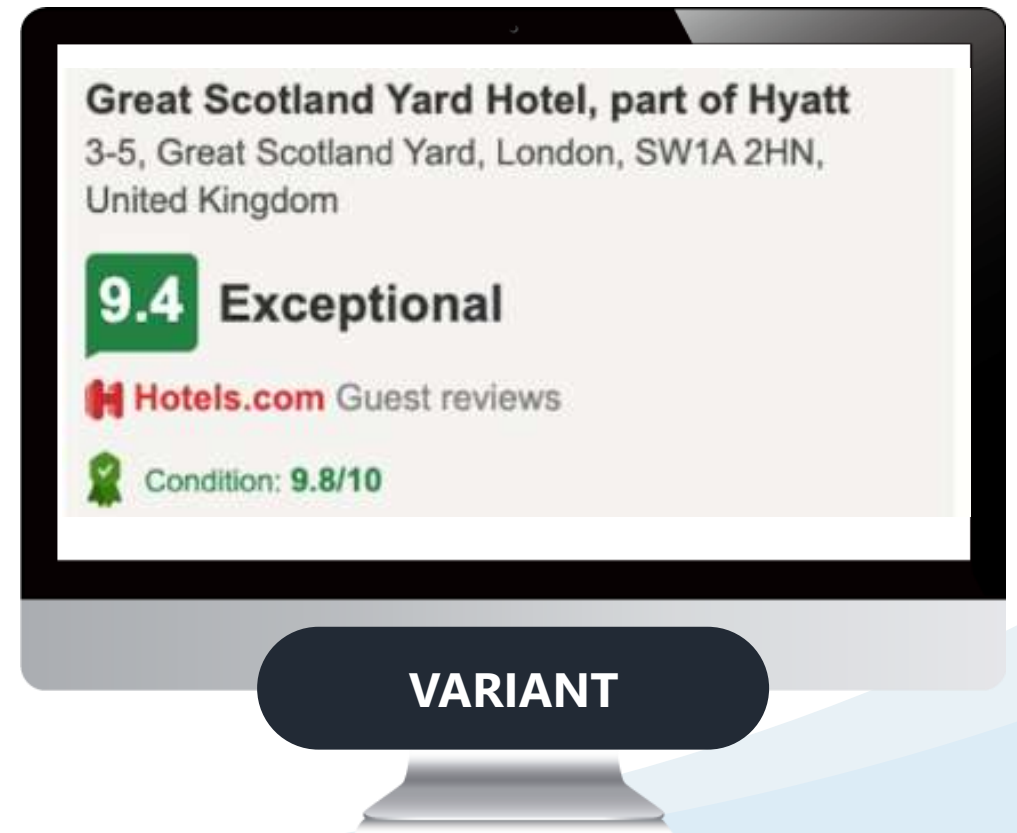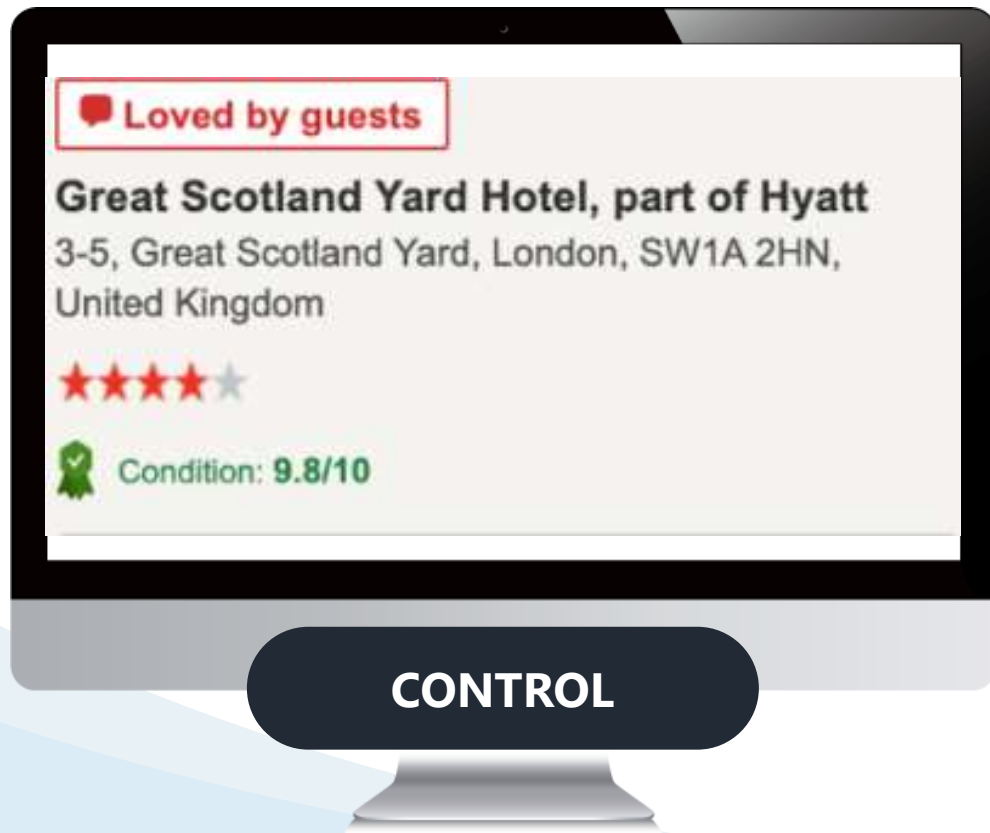
What do we test for?

In an A/B test, the primary metric determines whether the test "wins" or "loses. Secondary metrics provide additional information about the visitors' behaviour in the vicinity of your change and across your site.

Primary Metrics

Total Booking Sales
Total revenue of the company

Purchase/view rate
Conversion rate of the webpage visitors

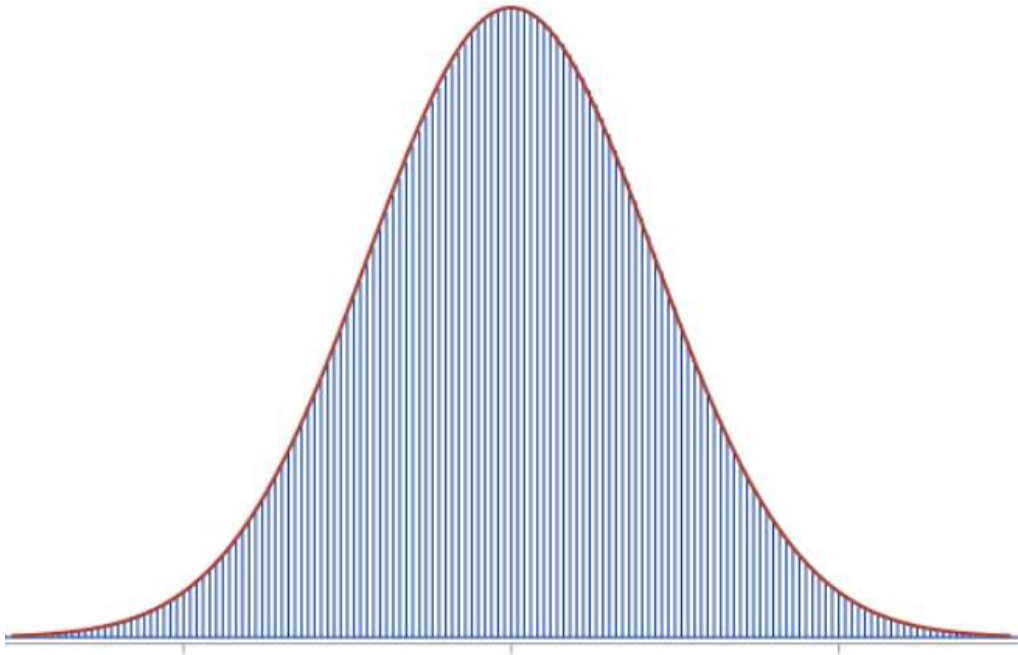## Secondary Metrics

Length of stay
Number of days that customers stay
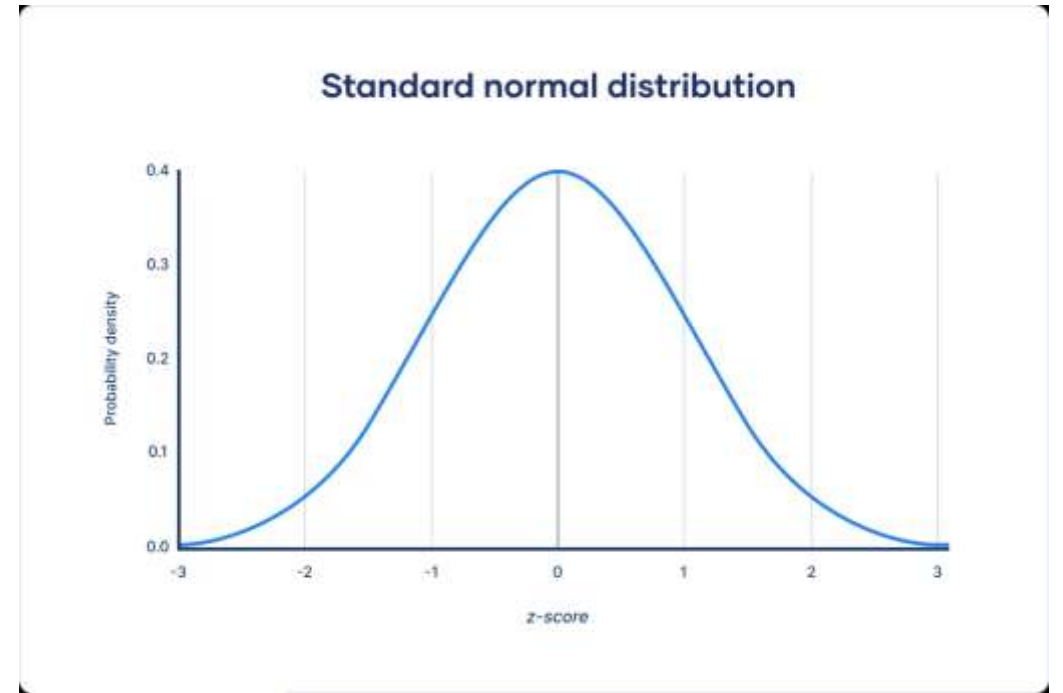
Average sales per day
Average sales per night

Two main models

Binomial distribution

Standard normal distribution

Numerical Result

+0.28%
Purchase/view rate

- Increase
- By 0.71%
- Significant change
- Insignificant by sample size

-$12.32
Average sales per customer

- Decrease
- By 6.32%
- Significant change
- Test is nearly 100% correct
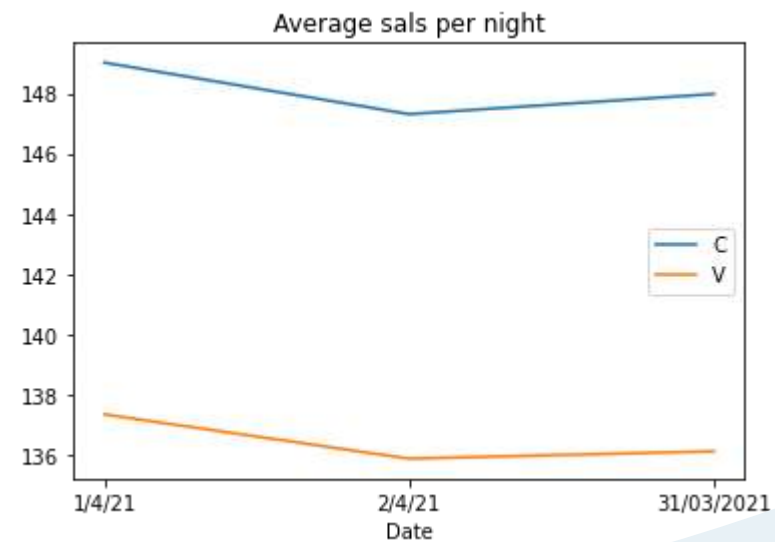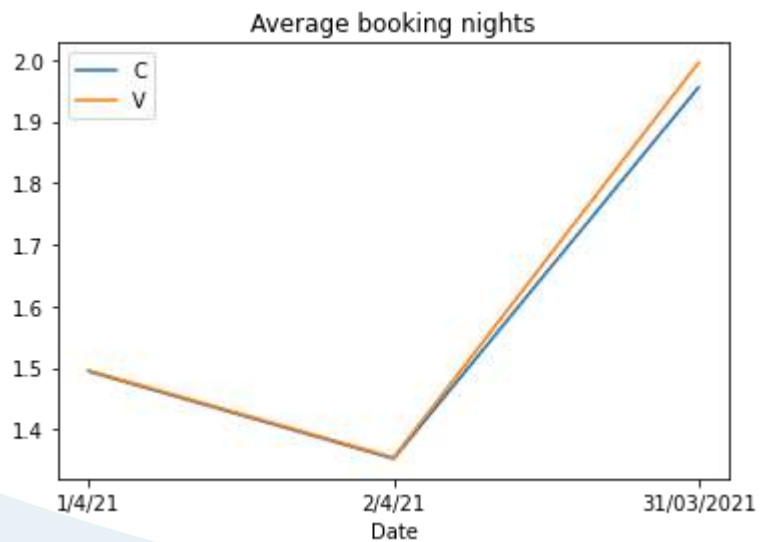
+0.017
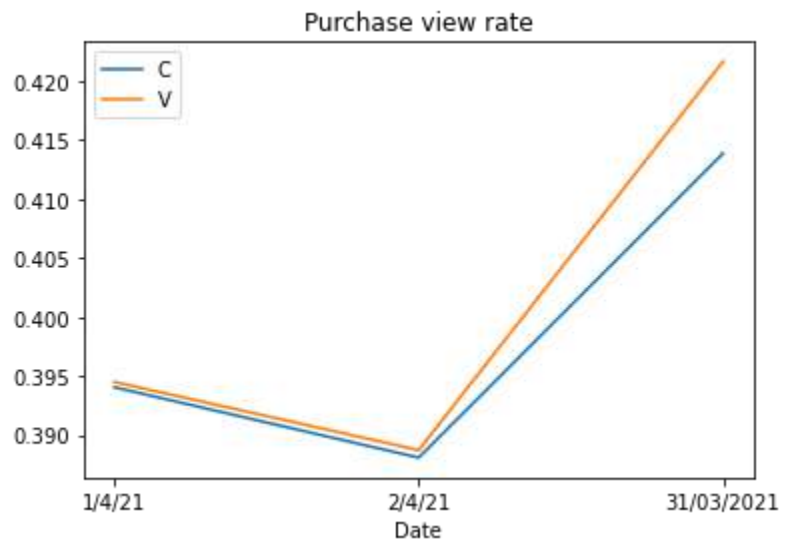### Length of stay / day

- Increase
- By 1.30%
- Insignificant change

-$11.67
Average sales per day

- Increase
- By 7.87.30%
- Significant change
- Test is nearly 100% correct

Graphical Result by Dates

Financial Impact

$ 1,871,038.4

Three days lost

Date	Values
31/03	- 6.67%
01/04	- 6.05%
02/04	- 6.12%

$ 83,089,696,900

Annual lost

DECREASE PERCENTAGE

6.3%

Conclusions

The strong negative effect on the total booking sales overweighs the benefit of the improvement in purchase/view rate and length of stay.

On the other hand, the length of stay increased by 1.30% while the sales per night dropped by 7.87%, which decreases faster than it increases. This means even with the longer stay time, we can still end up with a decrease in total sales.

Recommendations

Use the webpage that displays star ratings instead of customer ratings!

THANK YOU